



TITLE:

# Large Retroperitoneal Mass Diagnosed as Adrenal Chronic Expanding Hematoma.

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## **TITLE**

Large retroperitoneal mass diagnosed as adrenal chromoc expanding hematoma

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## ABSTRACT

Chronic expanding hematoma is defined as a structure with central mass of blood and granulation tissue encapsulated with dense fibrous membrane that slowly grows over a month. We report a case of a 67-year-old man with left adrenal chronic expanding hematoma who underwent surgical resection after 7-year surveillance, presenting natural history of an adrenal chronic expanding hematoma.

## CASE PRESENTATION

A 67-year-old man was diagnosed to have an asymptomatic left adrenal mass, diagnosed as chronic expanding hematoma based on CT scan (Figure 1) in 2007. He had been taking warfarin (2 mg/day) and aspirin (100 mg/day) since cardiac valve replacement in April 2000. The patient refused surgery until when the mass reached 16.6 cm in diameter and caused gastric distress in 2014 (Figure 2). At surgery, a 16-cm, 2300-g, round and adhesive mass (Figures 3A & B) was removed and the gastric distress was disappeared postoperatively. The final pathological diagnosis was adrenal chronic expanding hematoma (Figures 3C & D).

Adrenal chronic expanding hematoma is very rare and only a few cases have been reported in the literature<sup>1-4</sup> since the first report<sup>5</sup> and definition<sup>6</sup>. Recent accumulation of radiological findings in correlation with pathological diagnosis<sup>1-3,7,8</sup> has improved the accuracy of preoperative diagnosis of chronic expanding hematoma based on imaging studies.

This is to our knowledge the first report showing the natural history of an adrenal chronic expanding hematoma, a fairly slow but virtually constant growth over years. These findings will be helpful information for the management of adrenal chronic expanding hematoma including surgical resection and active surveillance according to the patient's age and comorbidity.

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## FIGURE LEGENDS

Figure 1. A-C: Pre-contrast (A), early (B) and late (C) phase images of contrast-enhanced CT scan of the mass in 2009. Contrast-enhancement is observed at the periphery in early phase and gradually and heterogeneously spread to the internal portion in late phase. D: Unenhanced CT image of the mass in 2014. Note that the enlarged mass with peripheral calcification oppresses the pancreas and stomach anteriorly (arrowheads).

Figure 2. Macroscopic (A, B) and microscopic (C, D) appearances of the resected mass lesion. A: The mass was encapsulated with fibrous connective tissue and blood vessels. B: The mass was filled with organized blood and necrotic tissue. C, D: Representative images of H&E stain of the lesion showing dense fibrous tissue on the periphery (C) and erythrocytes and necrotic tissue at the center (D). Original magnification x10.

Figure 3 Changes in the mass volume of the present patient is plotted. The solid line is an approximate line for estimated tumor volume based on CT images, indicating that the mass grew up at almost constant rate ( $\sim 250 \text{ mm}^3/\text{year}$ ). Dashed line is an extension of the approximate line that intersects X axis at May 2005.









